

IN THE SPECIFICATION:

After the Title of the Invention and before line 1, insert the following new heading and paragraph:

Cross Reference to Related Applications

The present application is based on prior U.S. Application Serial No. 09/997,819, filed on November 30, 2001, which is hereby incorporated by reference, and priority thereto for common subject matter is hereby claimed.

Paragraph beginning at line 3 of page 1 has been amended as follows:

The present invention relates to an apparatus for forming an optical aperture. In particular, the present invention relates to an apparatus for forming an optical aperture utilized in a near field device that radiates and/or detects near field light.

Paragraph beginning at line 17 of page 1 has been amended as follows:

~~Now, interest is~~ Interest has been focused on scanning near field optical microscopes (SNOM) that observe the interaction between the near field generated on the sample surface and the probe, ~~and~~ thus enabling the observation of ~~microrregions~~ microregions of the sample surface.

Paragraph beginning at line 10 of page 4 has been amended as follows:

The present invention ~~has been invented in the light of~~ overcomes the problems ~~as set forth of the conventional art.~~ The An apparatus for forming the an optical aperture according to the invention comprises with respect to an object ~~for aperture formation~~ having a tip of conical or pyramidal shape, a stopper having almost the same height as that of the tip and an opaque film formed on the tip, a and loading means for displacing a pressing body having approximately a planar part covering the tip and at least a part of the stopper by a force having a component acting toward the tip to form an aperture on the point of the tip. According to the apparatus for forming an optical aperture in the present invention, the displacement of the planar part of the pressing body is controlled by the stoppers which have almost the same height as that of the tip. Therefore, by simply pushing the planar part with a predetermined force it is easily possible to form an optical aperture. Additionally, it is possible to form an aperture in various environments such as in a vacuum, in a solution, and in the air. Furthermore, it does not require any specially designed controller when it is forming an aperture, resulting in simplification of the aperture forming apparatus. Additionally, it is easy to shorten the duration time of imposing the predetermined force, thus shortening the

time for aperture formation ~~, therefore and decreasing~~ the cost of aperture formation ~~can be decreased~~.

Paragraph beginning at line 8 of page 5 has been amended as follows:

A position controller ~~for setting~~ sets a load target point to a load point of the loader. The load target point ~~being~~ is disposed on a surface of the pressing body and over top of the tip. It is possible to control the displacement of the pressing body by a predetermined load toward the load target point. Therefore, optical apertures of uniform and minute size can be easily formed, making it easy to improve the yield of formation of optical apertures.

Heading at line 24 of page 12 has been amended as follows:

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Paragraph beginning at line 4 of page 13 has been amended as follows:

The apparatus for forming the aperture of the invention will be described referring to Figs. 1 to 3. Fig. 1 is a cross-sectional diagram showing a schematic configuration of the work 1000. As shown in the drawing, the work 1000 comprises a transparent layer 5 formed on a substrate 4, a tip of conical or pyramidal shape 1 and a ridge-shaped stopping member (hereinafter "stopper") ~~stopper~~ 2 formed on the

transparent layer 5, and an opaque film 3 formed on the tip 1, the stopper 2 and the transparent layer 5. Additionally, the transparent layer 5 is not necessarily needed here; in that case the opaque film 3 would be formed on the tip 1, the stopper 2 and the substrate 4. Furthermore, the opaque film 3 may be deposited only on the tip 1.

Paragraph beginning at line 1 of page 16 has been amended as follows:

In addition, this embodiment, the structure for applying a load onto the object for aperture forming that consists of a tip 1, a stopper 2, and an opaque film 3 is a plate 6 ~~with~~ and a presser 7 ~~on it~~. However, there may be cases ~~that~~ where either a plate 6 or a presser 7 alone ~~applies~~ can be used to apply load onto the object for forming the aperture ~~forming~~. In these cases a structure for applying a load onto the object for aperture forming may be called a pressing device or pressing body.

Paragraph beginning at line 19 of page 17 has been amended as follows:

As shown in Fig. 8A, the apparatus consists of a stage 401, a load controller 300, and a magnifying glass 402. The stage 401 is placed horizontally so that the work ~~400~~ 1000 and the transparent plate ~~6~~ 60 can be placed parallel in contact with one another. The stage 401 includes a double

axis ball screw stage in order to move horizontally in a plane.

Paragraph beginning at line 21 of page 30 has been amended as follows:

As described above, according to the apparatus for aperture forming in this invention, it is possible to form an optical aperture in a stable manner, because a constant load with high precision can be applied onto the load target point repeatedly. Additionally, the cost of the whole apparatus is low, which makes it possible to form an optical aperture with low cost. Furthermore, the structure of the apparatus is so simple that an automation of the aperture forming process is possible, and a mass production becomes possible.